

IN THE SPECIFICATION

Please amend the paragraph starting at page 14, line 1 as follows.

A1 The present sampling method mixes a symbol with symbols that are at a fixed time separation, compared to the conventional interleaving approach which mixes a given symbol with symbols that are in other fixed positions in the data stream regardless of data rate. In contrast to the conventional bit level or byte level interleaving approach, the span of error correction used in the present sampling method has no limit. The present sampling method allows overlapping error correction.

Please amend the paragraph starting at page 14, line 7 as follows.

A2 In implementing the present sampling method, an incoming data stream is divided into symbols (bits, bytes, or words, for example). The data stream is then sampled in and placed into threads, with samples taken at fixed time intervals. By way of example, if the noise bursts are typically no longer than 70 microseconds long, every 100 microseconds, for example, is sampled. With cyclic redundancy check (CRC) correction, a correction word is inserted into the data stream.

Please amend the paragraph starting at page 14, line 13 as follows.

A3 In a second embodiment of the present method, the same symbol is included in more than one of the threads. If the threads only partially overlap, a noise burst that overwhelms one of the threads may be within the limits of another thread. Those symbols that overlap may be determined, allowing the remainder of the non-overlapped threads to be determined.

Please amend the paragraph starting at page 16, line 13 as follows.

A4 On the receiving side of the communication channel, the arriving or received symbols, including both data and error correction symbols, get placed on their appropriate registers 11. Error detection and correction computations are performed using a queue 14 or stack 14 and the corrected data symbols are placed on a receive output buffer 15 in their correct positions. The output stream is drawn from the receive output buffer 15.

Please amend the paragraph starting at page 17, line 16 as follows.

A5 (2) From the data register 11, the symbol is moved to a queue 14 (stack 14), which is typically a ~~FIFO~~ LIFO (last in, first out) queue 14. Conceivably, this symbol may be immediately placed on the output transmission stream 19, in contrast to other devices, which

AS need to process a frame's worth of data to produce the error correction symbols and then place the frame's symbols on the transmission stream using interleaving. Although there is typically some buffering (not shown), the latency induced by the threaded sampling error correction device 10 is less than the conventional error correction devices.

Please amend the paragraph starting at page 18, line 3 as follows.

AG (5) When a given stack 14 has reached its its threshold (which may be different from stack to stack), the contents of the stack 14 are moved over to registers in an error correction computation unit 16 that calculates the error correction symbols for that stack 14. The error correction symbols are placed into an ECC queue 18. The error correction symbols may be grouped into a block appended to the end of the ECC queue 18 or they may be interspersed into the ECC queue 18, and subsequent ECC symbols may be interspersed with them. Note that different stacks 14 may be processed using different error correction algorithms such as Reed-Solomon of some mode or a Cyclic Redundancy Check, for example.

Please amend the paragraph starting at page 18, line 23 as follows.

A7 (7) Symbols from both the data queue 17 and the ECC queue 18 are ~~place~~ placed onto the transmission stream 19. The symbols from each may be interspersed or they may be contiguous. However, within each type, they are consecutive.

Please amend the paragraph starting at page 19, line 1 as follows.

AY In view of the above, and for the purposes of completeness, Figs. 5 and 6 illustrate two embodiments of methods in accordance with the present invention. Fig. 5 is a flow diagram illustrating a first embodiment of an error correction method ~~40 20~~ for use with a bursty communication channel in accordance with the principles of the present invention. The error correction method ~~40 20~~ comprises the following steps. An incoming data stream is divided 21 into symbols. The incoming data stream may comprise symbols in the form of bits, bytes, or words, for example. The divided data stream (bits, bytes, words) is then sampled 22 ~~in~~ and placed into threads, with samples taken at fixed time intervals. The fixed time intervals are slightly longer than the time interval of the bursts of data. For instance, if the bursts of data are typically no longer than 70 microseconds long, the data stream is sampled every 100 microseconds. The sampling method ~~40 20~~ thus mixes a correction symbol with symbols of the divided data stream that have a fixed time separation. When cyclic redundancy check (CRC) correction, for example, is implemented using the present method 10, a correction symbol (bit, byte, or word) is inserted 23 into the data (symbol) stream. The data stream is transmitted 25. The transmitted data stream is received 26. Error detection and correction

A-8 computations are performed 27 on the data and error correction symbols. An error corrected data stream is ~~outputt~~ output 28.

Please amend the paragraph starting at page 19, line 19 as follows.

A-9 Referring to Fig. 6, it is a flow diagram illustrating a second embodiment of the error correction method ~~40 20~~. In the second embodiment of the error correction method ~~40 20~~, the incoming data stream is divided 21 into symbols. The divided data stream is then sampled 22 in threads, with samples taken at fixed time intervals. The same correction symbol is inserted 24 in more than one of the threads. The data stream is transmitted 25. The transmitted data stream is received 26. Error detection and correction computations are performed 27 on the data and error correction symbols. An error corrected data stream is output 28.

Please amend the Abstract, starting at page 24, line 1 as follows.

A-10 An error correction method wherein an incoming data stream is divided into symbols. The divided data stream is sampled ~~in~~ and placed into threads, with samples taken at fixed time intervals. The fixed time intervals are slightly longer than the ~~time interval~~ durations of the bursts of data. A correction symbol is thus mixed with symbols of the divided data stream that have a fixed time separation. This generates an error corrected data stream. In a second embodiment, the same correction symbol is inserted in more than one thread. The threads are selected so that they partially overlap. Thus, a noise burst on the channel that overwhelms one of the threads will be within the limits of another one of the threads. The symbols that overlap may be determined using the overlapping symbols of the threads that are not overwhelmed, thus allowing the remainder of the non-overlapped threads to be determined.
